



# SHOPP Asset Management Pilot Request Form

SHOPPCPR: Ver 3 11/14

Submittal Date

Division of Transportation Programming  
State Highway Operation and Protection Program (SHOPP)

Project Manager Kannu Balan

Phone (510) 622-1760

Dist	County	Route	Prefix	PM	Prefix	PM	EA	PPNO	Project ID
04	San Mateo	280	R	9.1	R	12.9	2A970		04-1200-0161

☒ Includes Multiple Locations (Complete Page 2 of this Form)

MPO:

MTC

Project Location/Description (Include the nearest city, town or landmark)

In San Mateo County, near San Carlos, from Edgewood Road to Crystal Springs Reservoir Road, and in Santa Clara County, in Mountain View and in Los Altos Hills, from Mora Drive to Page Mill Road

Need for project and proposed improvements (Elaborate using PID language)

Replace or line culverts, repair slope erosion with RSP, repair settling pavement with injection grouting

PA&amp;ED / M200

02/28/2019

R/W Cert / M410

03/31/2020

CCA / M600

12/30/2021

PS&amp;E / M380

02/28/2020

RTL / M460

04/15/2020

END Project / M800

12/30/2023

Support (\$1,000)

Capital (\$1,000)  
(Escalated to FY of Programming)  
FY Cost

R/W	2021/22	\$100
Construction	2021/22	\$8,950
Total Capital		\$9,050

	FY	Cost
PA & ED	2018/19	\$1,191
PS & E	2019/20	\$1,507
R/W	2019/20	\$85
Construction	2021/22	\$2,072
Total Support		\$4,855

Legislative District Numbers  
(Separate multiple Districts with a comma)

State Assembly	24
State Senate	13
Congressional	14, 18

☐ Approved ☐ DeniedCAPITAL CONSTRUCTION  
COST ESCALATION RATE

3%

District SFP (Print)	DOANH NGUYEN	District SFP (Sign)		Phone	(510) 286-6293
District Director (Print)	BIJAN SARTIDI	District Director (Sign)		Phone	510.286.5900
SHOPP Exec. (Print)		SHOPP Exec. (Sign)		Phone	

04 - San Mateo - 280

EFIS: 04-1200-0161

[illegible]

## Asset Management Pilot Project Nomination

SM, SCI-280-PM R9.1/R12.9, 12.9/18.8

August 13, 2015

This pilot project proposes using asset management principles to address the overall transportation needs of a major transportation project on Route 280 (I-280) in San Mateo and Santa Clara counties. This pilot project will quantify the safety and rehabilitation needs and will propose the corresponding programming for each need.

### **Project Background**

This project proposes to address the following pavement, slope stability, and drainage needs:

Route 280 in San Mateo County near San Carlos

- Replace or line culverts from Edgewood Road (PM R9.1) to Route 92 (PM R10.5)
- Repair slope erosion with rock slope protection (RSP) at Crystal Springs Road (PM R12.9)

Route 280 in Santa Clara County in Mountain View and in Los Altos Hills

- Replace failed culvert and repair sinkhole at Mora Drive (PM 12.9)
- Repair settling pavement with injection grouting at Page Mill Road (PM 18.4/18.8)

The total estimated need is \$13,905,000, none of which are currently programmed.

### **Safety**

For the drainage in the San Mateo County portion, culverts along the identified stretch of Route 280 are deteriorated or materially failed. When culverts are no longer structurally sound or have rotted completely away, the ground above collapses, causing the appearance of sinkholes on a heavily traveled commute route. Rehabilitating the culverts will also contribute to worker safety, as the pavement has been known to collapse under the weight of maintenance vehicles.

The pavement settlement in the Santa Clara County portion causes a sudden pavement dip on a freeway route. This can lead to vehicle damage or loss of driver control. Maintenance workers must continually go out to this location for pavement leveling work. If the injection grouting can be implemented, worker safety will be improved from decreased exposure.

### **Stewardship and Efficiency Needs**

The following SHOPP-related needs exist within the project limits:

Item (Program)	Performance Measures	Description of Work	Cost
Drainage System (151)	10 Drainage Systems	Replace or line culverts for 9 drainage systems from Edgewood Road to Route 92 in San Mateo County, replace 1 drainage system at Mora Road in Santa Clara County, work includes necessary pavement repairs	\$11,360,000
Protective Betterment (150)	2 Locations	Repair slope erosion with RSP at Crystal Springs Road in San Mateo County, inject grout into subsurface voids at Page Mill Road, includes necessary pavement repairs	\$2,545,000

### **Sustainability, Livability, and Economy**

Elements of the project reduce the impacts of the transportation system upon the environment. The drainage and slope erosion locations in San Mateo County are within the drainage shed of the Crystal Springs Reservoir, as well as creeks that drain into San Francisco Bay. Slope erosion and damaged drainage allow additional transport of sediment, a detriment to water quality.

Making the necessary drainage system repairs will also reduce disruption to commute traffic. The sinkholes cause lane loss and closure for emergency work. Likewise, repairing continually settling pavement disrupts traffic.

### **System Performance**

Implementing the necessary drainage system repairs will reduce disruption to commute traffic by eliminating the cause of recurring emergency work. The drainage system is reaching, or has reached, the end of its useful life and must be rehabilitated. Over the past 5 years, there were over \$3 million in emergency projects due to sinkholes along this stretch of Route 280.

### **Funding Plan**

The following table depicts the un-programmed needs broken down by component.

<b>Component</b>	<b>Currently Unprogrammed SHOPP Needs</b>
PAED	\$1,191,000
PS&E	\$1,507,000
Right of Way Support	\$85,000
Right of Way Capital	\$100,000
Construction Support	\$2,072,000
Construction Capital	\$8,950,000
Total Project Cost	\$13,905,000

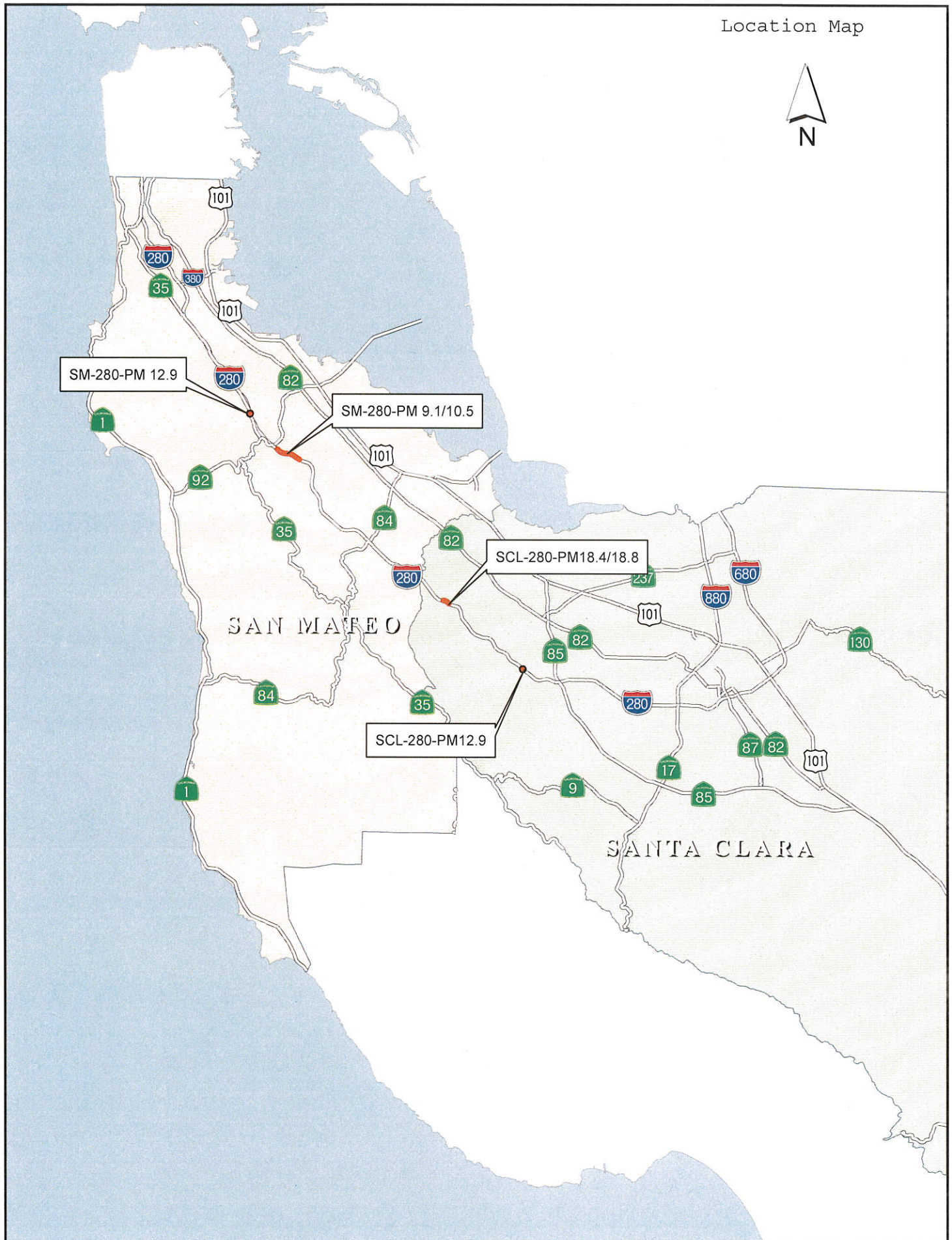
### **Recommendation**

Under normal circumstances up to four projects would be programmed to address the repairs discussed herein. However, in an effort to promote asset management, the proximity of these projects make them ideal for combination into a single project.

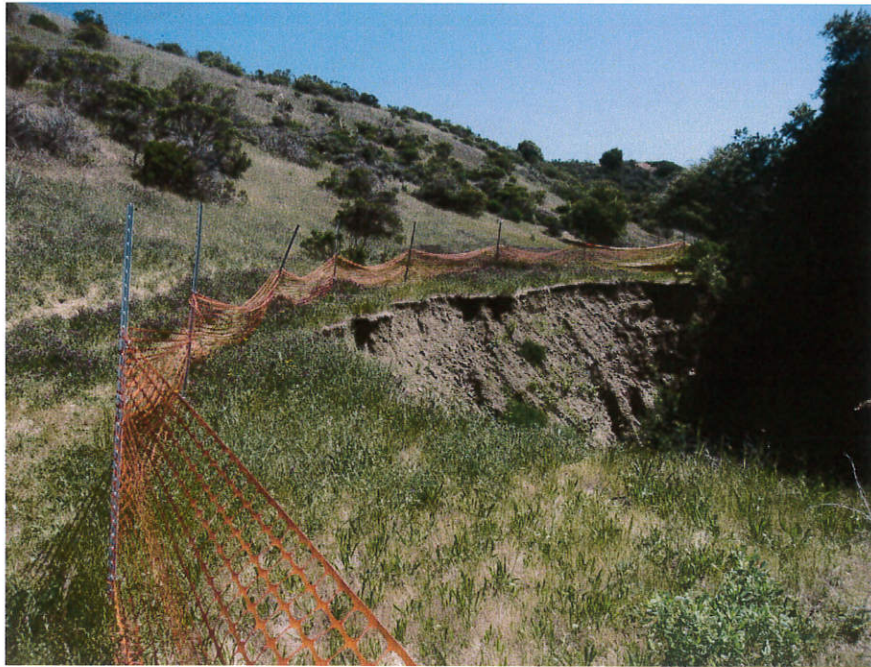
#### **Attachments:**

1. Location Map
2. Photo









Sinkhole at base of SM-280 embankment near Edgewood Road in 2013



Sinkholes at Edgewood Road off-ramp in 2010





Maintenance vehicle shortly after extraction from  
pavement that collapsed from sinkhole near Edgewood Road in 2011



Erosion at Crystal Springs Road in 2010



Sinkhole at Mora Drive in 2012



Envision Rating System  
Self-Assessment Checklist

**Sustainability Goal** points minimally includes Green Assessment Questions on 5 Tabs (Quality of Life, Leadership, Resource Allocation, Natural World, and Climate & Risk). One point is earned for each "Yes" Answer (50 points possible) and bonus points for additional question may be considered (93 additional points). Projects will be ranked for the Sustainability Goal based on these points.



## Quality of Life

### 1. Purpose

#### QL 1.1 Improve Community Quality of Life

**Intent:** Improve the net quality of life of all communities affected by the project and mitigate negative impacts to communities.

**Metric:** Measures taken to assess community needs and improve quality of life while minimizing negative impacts.

**Assessment Questions:**

	Yes	No	N/A	
Are the relevant community needs, goals and issues being addressed in the <u>corridor, nom or project</u> ?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Are the potentially <u>negative impacts</u> of the <u>project</u> on the host and nearby communities been reduced or eliminated?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Has the <u>project design</u> received broad community endorsement, including community leaders and stakeholder groups?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
<b>Total</b> 0 of 1				

Prosperity

#### QL 1.2 Stimulate Sustainable Growth and Development

**Intent:** Support and stimulate sustainable growth and development, including improvements in job growth, capacity building, productivity, business attractiveness and livability.

**Metric:** Assessment of the project's impact on the community's sustainable economic growth and development.

**Assessment Questions:**

	Yes	No	N/A	
Will the project contribute significantly to local employment?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the project make a significant increase in local productivity?	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	?
Will the <u>project concept</u> make the community more attractive to people and businesses?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
<b>Total</b> 2 of 2				

#### QL 1.3 Develop Local Skills and Capabilities

**Intent:** Expand the knowledge, skills and capacity of the community workforce to improve their ability to grow and develop.

**Metric:** The extent to which the project will improve local employment levels, skills mix and capabilities.

**Assessment Questions:**

	Yes	No	N/A	
Does the project team intend to hire and train a substantial number of local workers?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Does the project team intend to use a substantial number of local suppliers and specialty firms?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
Will the project, through local employment, subcontracting and education programs, make a substantial improvement in local capacity and competitiveness?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
<b>Total</b> 0 of 0				

Corridor=C	Project nomination =PN	Project=P
------------	------------------------	-----------

X	X	X
X	X	X
X	X	X

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

		X
--	--	---

		X
--	--	---

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

X		X
---	--	---

--	--	--

X	X	X
---	---	---

X	X	X
---	---	---

X	X	X
---	---	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

		X
--	--	---

### 2. Wellbeing

Res  
Conservation

#### QL 2.1 Enhance Public Health and Safety

**Intent:** Take into account the health and safety implications of using new materials, technologies or methodologies above and beyond meeting regulatory requirements.

**Metric:** Efforts to exceed normal health and safety requirements, taking into account additional risks in the application of new technologies, materials and methodologies.

**Assessment Questions:**

	Yes	No	N/A	
Does the owner and the project team intend to identify, assess and institute new standards to address additional risks and exposures created by the application of new technologies, materials, equipment and/or methodologies?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	?
<b>Total</b> 0 of 0				

#### QL 2.2 Minimize Noise and Vibration

**Intent:** Minimize noise and vibration generated during construction and in the operation of the completed project to maintain and improve community livability.

**Metric:** The extent to which noise and vibration will be reduced during construction and operation.



Corridor=C      Project  
nomination  
=PN

<b>QL 2.3 Minimize Light Pollution</b>			
<b>Intent:</b> Prevent excessive glare, light at night, and light directed skyward to conserve energy and reduce obtrusive lighting and excessive glare.			
<b>Metric:</b> Lighting meets minimum standards for safety but does not spill over into areas beyond site boundaries, nor does it create obtrusive and disruptive glare.			
<b>Assessment Questions:</b>	Yes	No	N/A
Will the project be designed to reduce excessive lighting, prevent light spillage and preserve/restore the night sky?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/> ?
<b>Total</b>	0	of	0

		X
		X
		X
X		
		X
X		X
X		X
X		X
X		X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
		X
	X	X
X	X	X
X	X	X
X	X	X

X	X	X
X	X	X
X	X	X
X	X	X

X		X		X
X		X		X
X		X		X
X		X		X
X		X		X
X		X		X
X		X		X
X		X		X

<b>QT 3.1 Preserve Historic and Cultural Resources</b>			
<b>Intent:</b> Preserve or restore significant historical and cultural sites and related resources to preserve and enhance community cultural resources.			
<b>Metric:</b> Summary of steps taken to identify, preserve or restore cultural resources.			
<b>Assessment Questions:</b>		Yes	No
		N/A	

X	X	X
X	X	X
X	X	X
X	X	X
X	X	X
X	X	X

Will the project minimize negative impacts on historic and cultural resources? At corridor plan and nomination, have you consulted the tribal, historic and cultural resource staff in Environmental (PQS)?	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<a href="#">?</a>
Will the project be designed so that it fully preserves and/or restores historic/cultural resources on or near the project site? (Required in NEPA & CEQA)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<a href="#">?</a>
<div>Total 0 of 0</div>				

SCMP

Yes No N/A

**Total** 1 of 1

sect 4F

Yes No N/A

Total 0 of 0

X      X      X

**CONTINUE ON TO THE LEADERSHIP CATEGORY →**